

ABSTRACT

An object is to provide a printing plate material which can be adapted to digitization of the printing process and recycled and a method for renewing it. As the printing plate material, there can be used one which includes a substrate on the surface of which a coat layer containing a titanium oxide photocatalyst and at least one member selected from Fe^{2+} , Ni^{2+} , Mn^{2+} , Cr^{3+} , and Cu^{2+} is formed. In an initial state of the printing plate as prepared, it is adjusted to a state where the surface of the coat layer is hydrophobic. This surface is irradiated with ultraviolet rays to convert a part of the surface to a hydrophilic surface. This conversion is performed based on digital data corresponding to an image to be printed. In this case, the hydrophobic portion is used as a printing image portion and the hydrophilic portion is used as a non-printing image portion. After completion of the printing, the compound is applied again to change the surface of the coat layer into the initial state of the printing plate as prepared, in which the surface of the coat layer exhibits hydrophobicity again.